AMENDMENTS TO THE CLAIMS

The following is a complete listing of revised claims with a status identifier in parenthesis.

LISTING OF CLAIMS

1. (Currently Amended) A computer readable medium having a data structure for managing reproduction of video data having at least one reproduction path recorded on the computer readable medium, comprising:

a data area for storing stream files, each stream file including ~~clip files of~~ ~~at least~~ video data, each stream ~~clip~~ file associated with one of a portion common to the reproduction paths and a ~~portion specific to a~~ particular reproduction path among the reproduction paths of the video data; ~~and~~

a playlist area for storing a playlist file, the playlist file for identifying the common reproduction path portions and the particular reproduction path to reproduce; and

a clip information area for storing management information for managing reproduction of the video data, the management information including clip information files, each one of the clip information files being associated with a corresponding stream file, ~~a management area, separated from the data area,~~ ~~for storing management information for managing reproduction of the video~~ ~~data, the management information including an information file associated~~ ~~with each clip file,~~ each clip information file for providing a map for the associated stream ~~clip~~ file, each map for mapping presentation time

information to address information for the associated ~~clip~~ <u>stream</u> file<u>, the clip</u> <u>information file, the playlist file and the stream file being logically separate</u>.

2. (Currently Amended) The computer readable medium of claim 1, wherein the ~~clip~~ <u>stream</u> files are interleaved.

3. (Currently Amended) The computer readable medium of claim 2, wherein the ~~clip~~ <u>stream</u> files associated with particular reproduction path ~~portions~~ are interleaved between the ~~clip~~ <u>stream</u> files associated with common reproduction path portions.

4. (Currently Amended) The computer readable medium of claim 2, wherein the ~~clip~~ <u>stream</u> files have a size to prevent a reproducing apparatus buffer from under-flowing during reproduction of the ~~clip~~ <u>stream</u> files.

5. (Currently Amended) The computer readable medium of claim 4, wherein the ~~clip~~ <u>stream</u> files have a size to prevent the reproducing apparatus buffer from over-flowing during reproduction of the ~~clip~~ <u>stream</u> files.

6. (Currently Amended) The computer readable medium of claim 5, wherein more than one <u>stream</u> ~~clip~~ file is associated with a same one of a common reproduction path portion and a particular reproduction path ~~portion~~ when the one of the common reproduction path portion and the particular reproduction

path ~~portion~~ includes data exceeding a ~~clip~~ stream file size to prevent the

reproducing apparatus buffer from over-flowing during reproduction of the ~~clip~~

stream files.

7. (Currently Amended) The computer readable medium of claim 2, wherein the

~~clip~~ stream files have a size to prevent the reproducing apparatus buffer from

over-flowing during reproduction of the ~~clip~~ stream files.

8. (Currently Amended) The computer readable medium of claim 7, wherein

more than one ~~clip~~ stream file is associated with a same one of a common

reproduction path portion and a particular reproduction path ~~portion~~ when the

one of the common reproduction path portion and the particular reproduction

path ~~portion~~ includes data exceeding a ~~clip~~ stream file size to prevent the

reproducing apparatus buffer from over-flowing during reproduction of the ~~clip~~

stream files.

9. (Currently Amended) The computer readable medium of claim 1, wherein the

~~clip~~ stream files have a size to prevent a reproducing apparatus buffer from

under-flowing during reproduction of the ~~clip~~ stream files.

10. (Currently Amended) The computer readable medium of claim 1, wherein

the ~~clip~~ stream files have a size to prevent the reproducing apparatus buffer

from over-flowing during reproduction of the ~~clip~~ stream files.

11. (Currently Amended) The computer readable medium of claim 10, wherein more than one ~~clip~~ stream file is associated with a same one of a common reproduction path portion and a particular reproduction path ~~portion~~ when the one of the common reproduction path portion and the particular reproduction path ~~portion~~ includes data exceeding a ~~clip~~ stream file size to prevent the reproducing apparatus buffer from over-flowing during reproduction of the stream ~~clip~~ files.

12. (Currently Amended) A method of recording a data structure for managing reproduction of video data having at least one reproduction path on a recording medium, comprising:

recording ~~clip~~ stream files ~~of at least video data~~ in a data area of the recording medium, each stream file including video data, each stream ~~clip~~ file associated with one of a portion common to the reproduction paths and ~~a portion specific to~~ a particular reproduction path among the reproduction paths; ~~and~~

recording a playlist file in a playlist area of the recording medium, the playlist file for identifying the common reproduction path portions and the particular reproduction path to reproduce; and

recording management information for managing reproduction of the video data in clip information files, the clip information files being recorded in a clip information area of the recording medium, each one of the clip information

files being associated with a corresponding stream file, ~~management~~
~~information in a management area separate from the data area, the~~
~~management information for managing reproduction of the video data, the~~
~~management information including an information file associated with each~~
~~clip file,~~ each <u>clip</u> information file for providing a map for the associated ~~clip~~
<u>stream</u> file, each map for mapping presentation time information to address
information for the associated <u>stream</u> ~~clip~~-file<u>, the clip information file, the</u>
<u>playlist file, and the stream file being logically separate</u>.

13. (Currently Amended) A method of reproducing a data structure for
managing reproduction of video data having at least one reproduction path
recorded on a recording medium, comprising:

reproducing ~~clip~~ <u>stream</u> files ~~of at least video data~~ from <u>a data area of</u>
the recording medium, <u>each stream file including video data,</u> each ~~clip~~ <u>stream</u>
file associated with one of a portion common to the reproduction paths and ~~a~~
~~portion specific to~~ a particular reproduction path among the reproduction
paths; and

<u>reproducing a playlist file recorded in a playlist area of the recording</u>
<u>medium, the playlist file for identifying the common reproduction path portions</u>
<u>and the particular reproduction path to reproduce;</u>

reproducing management information <u>for managing reproduction of the</u>
<u>video data from clip information files, the clip information files being recorded</u>
<u>in a clip information area of the recording medium,</u> ~~the management area~~

~~separate from the data area, the management information for managing~~

~~reproduction of the video data, the management information including an~~ , each one of the clip information file<u>s</u> associated with <u>a corresponding</u> ~~each~~ stream ~~clip~~-file, each <u>clip</u> information file for providing a map for the associated ~~clip~~ <u>stream</u> file, each map for mapping presentation time information to address information for the associated ~~clip~~ <u>stream</u> file<u>, the clip information file, the playlist file, and the stream file being logically separate</u>.

14. (Currently Amended) An apparatus for recording a data structure for managing reproduction of video data having at least one reproduction path on a recording medium, comprising:

an optical recording unit configured to record data on the recording medium;

an encoder configured to encode at least video data having at least one reproduction path; and

a controller, coupled to the optical recording unit, configured to control the optical recording unit to record ~~clip~~ <u>stream</u> files ~~of at least video data~~ output from the encoder in a data area of the recording medium,<u> each stream file including video data,</u> each ~~clip~~ <u>stream</u> file associated with one of a portion common to the reproduction paths and ~~a portion specific to~~ a particular reproduction path among the reproduction paths<u>;</u>~~;~~

<u>the controller configured to the optical recording unit to record a playlist file in a playlist area of the recording medium, the playlist file for identifying</u>

the common reproduction path portions and the particular reproduction path portions to reproduce; and

the controller configured to control the optical recording unit to record management information for managing reproduction of the video data in clip information files, the clip information files being recorded in a clip information area of the recording medium, each one of the clip information files being associated with a corresponding stream file, ~~a management area separate from the data area, the management information for managing reproduction of the video data , the management information including an information file associated with each clip file,~~ each clip information file for providing a map for the associated ~~clip~~ stream file, each map for mapping presentation time information to address information for the associated ~~clip~~ stream file, the clip information file, the playlist file, and the stream file being logically separate.

15. (Currently Amended) An apparatus for reproducing a data structure for managing reproduction of video data having at least one reproduction path recorded on a recording medium, comprising:

an optical reproducing unit configured to reproduce data recorded on the recording medium;

a controller, coupled to the optical reproducing unit, configured to control the optical reproducing unit to reproduce ~~clip~~ stream files ~~of at least video data~~ from the recording medium, each stream file including video data, each ~~clip~~ stream file associated with one of a portion common to the

reproduction paths and ~~a portion specific to~~ a particular reproduction path among the reproduction paths~~;~~;

the controller configured to the optical recording unit to reproduce a playlist file from a playlist area of the recording medium, the playlist file for identifying the common reproduction path portions and the particular reproduction path to reproduce; and

the controller configured to control the optical reproducing unit to reproduce management information for managing reproduction of the video data from clip information files, the clip information files recorded in a clip information area of the recording medium, each one of the clip information files ~~a management area of the recording medium, the management area being~~ ~~separate from the data area, the management information including an~~ ~~information file~~ being associated with a corresponding ~~each clip~~ stream file, each clip information file for providing a map for the associated steam ~~clip~~ file, each map for mapping presentation time information to address information for the associated stream ~~clip~~ file, the clip information file, the playlist file, and the stream file being logically separate.

16. (Currently Amended) The computer readable medium of claim 3, wherein only one ~~clip~~ stream file is associated with each particular portion representing a same time period of the video data.

17. (Previously Presented) The computer readable medium of claim 16, wherein

the video data is represented by packets; and

each map maps presentation time stamps to packet addresses.

18. (Previously Presented) The computer readable medium of claim 1, wherein

the video data is represented by packets; and

each map maps presentation time stamps to packet addresses.

19. (Currently Amended) The method of claim 12, wherein the ~~clip~~ steam files associated with particular reproduction path ~~portions~~ are interleaved between the ~~clip~~ stream files associated with common reproduction path portions.

20. (Currently Amended) The method of claim 12, wherein the ~~clip~~ stream files have a size to prevent the reproducing apparatus buffer from over-flowing during reproduction of the ~~clip~~ stream files.

21. (Currently Amended) The method of claim 12, wherein the ~~clip~~ stream files have a size to prevent a reproducing apparatus buffer from under-flowing during reproduction of the ~~clip~~ stream files.

22. (Currently Amended) The method of claim 13, wherein the ~~clip~~ stream files associated with particular reproduction path portions are interleaved between the ~~clip~~ stream files associated with common reproduction path portions.

23. (Currently Amended) The method of claim 13, wherein the ~~clip~~ stream files have a size to prevent the reproducing apparatus buffer from over-flowing during reproduction of the ~~clip~~ stream files.

24. (Currently Amended) The method of claim 13, wherein the ~~clip~~ stream files have a size to prevent a reproducing apparatus buffer from under-flowing during reproduction of the ~~clip~~ stream files.

25. (Currently Amended) The apparatus of claim 14, wherein the ~~clip~~ stream files associated with particular reproduction path ~~portions~~ are interleaved between the ~~clip~~ stream files associated with common reproduction path portions.

26. (Currently Amended) The apparatus of claim 14, wherein the ~~clip~~ stream files have a size to prevent the reproducing apparatus buffer from over-flowing during reproduction of the ~~clip~~ stream files.

27. (Currently Amended) The apparatus of claim 14, wherein the ~~clip~~ stream files have a size to prevent a reproducing apparatus buffer from under-flowing during reproduction of the stream ~~clip~~ files.

28. (Currently Amended) The apparatus of claim 15, wherein the ~~clip~~ stream files associated with particular reproduction path ~~portions~~ are interleaved

between the ~~clip~~ stream files associated with common reproduction path

portions.

29. (Currently Amended) The apparatus of claim 15, wherein the ~~clip~~ stream

files have a size to prevent the reproducing apparatus buffer from over-flowing

during reproduction of the ~~clip~~ stream files.

30. (Currently Amended) The apparatus of claim 15, wherein the ~~clip~~ stream

files have a size to prevent a reproducing apparatus buffer from under-flowing

during reproduction of the ~~clip~~ stream files.

31. (Cancelled)

32. (Currently Amended) The computer readable medium of claim 1~~-31~~,

wherein the playlist file includes at least one indicator for indicating a

reproduction order of the common and particular reproduction path ~~portions~~.